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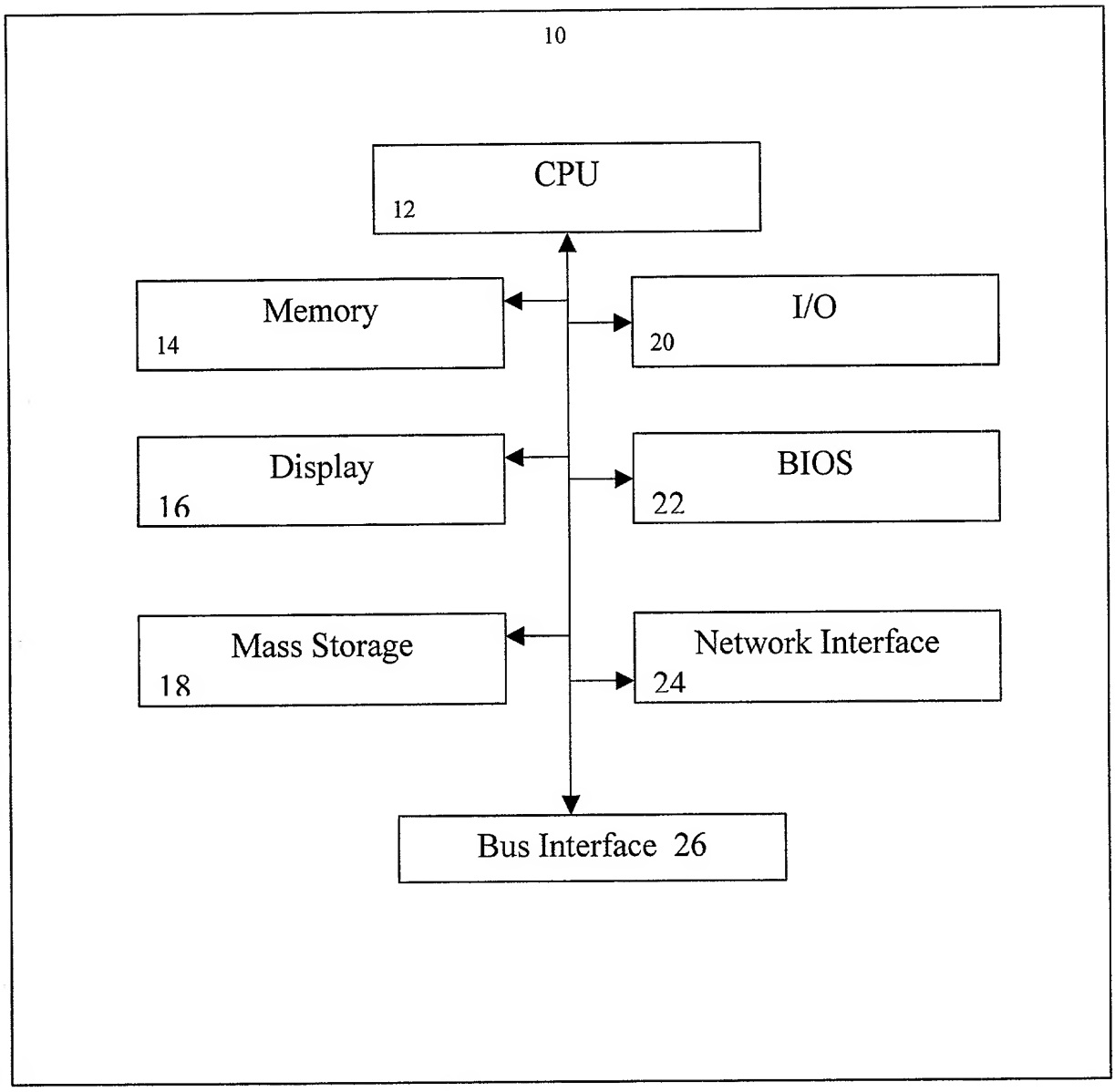

Figure 1

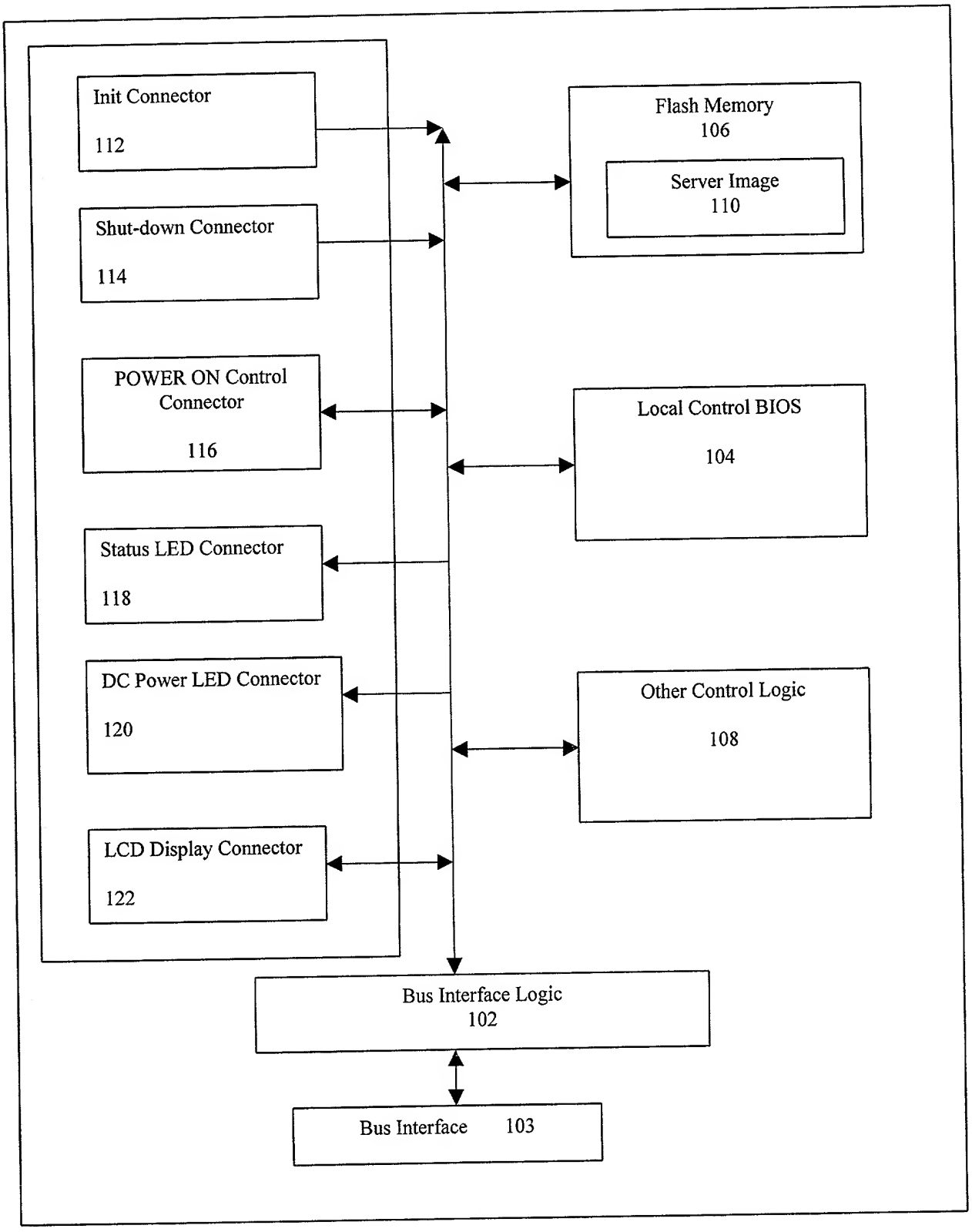
Init Connector
112
Shut-down Connector
114
POWER ON Control Connector
116
Status LED Connector
118
DC Power LED Connector
120
LCD Display Connector
122
Flash Memory
106
Server Image
110
Local Control BIOS
104
Other Control Logic
108
Bus Interface Logic
102
Bus Interface 103

Figure 2

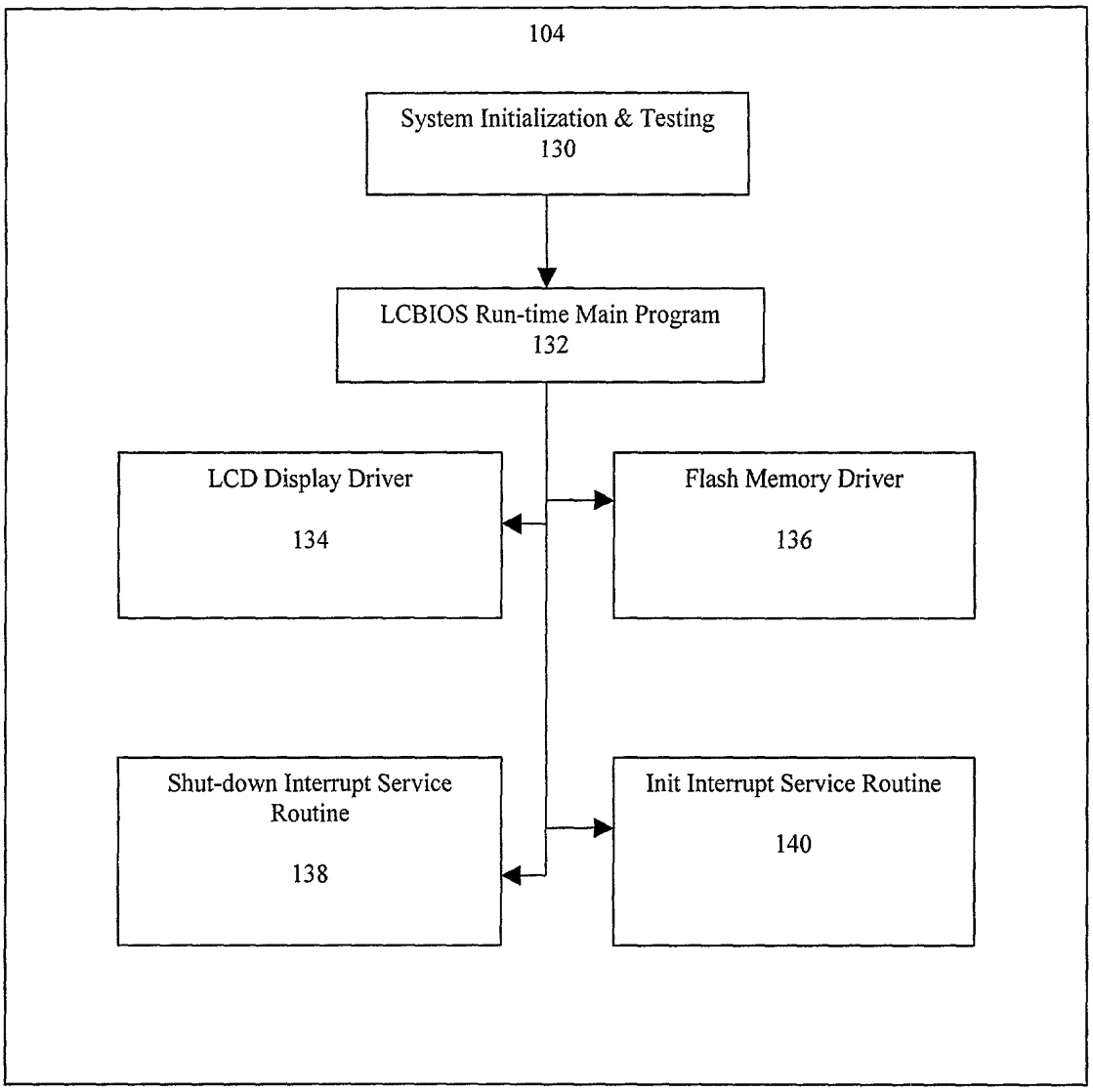
104
System Initialization & Testing
130
LCBIOS Run-time Main Program
132
LCD Display Driver
134
Flash Memory Driver
136
Shut-down Interrupt Service Routine
138
Init Interrupt Service Routine
140

Figure 3

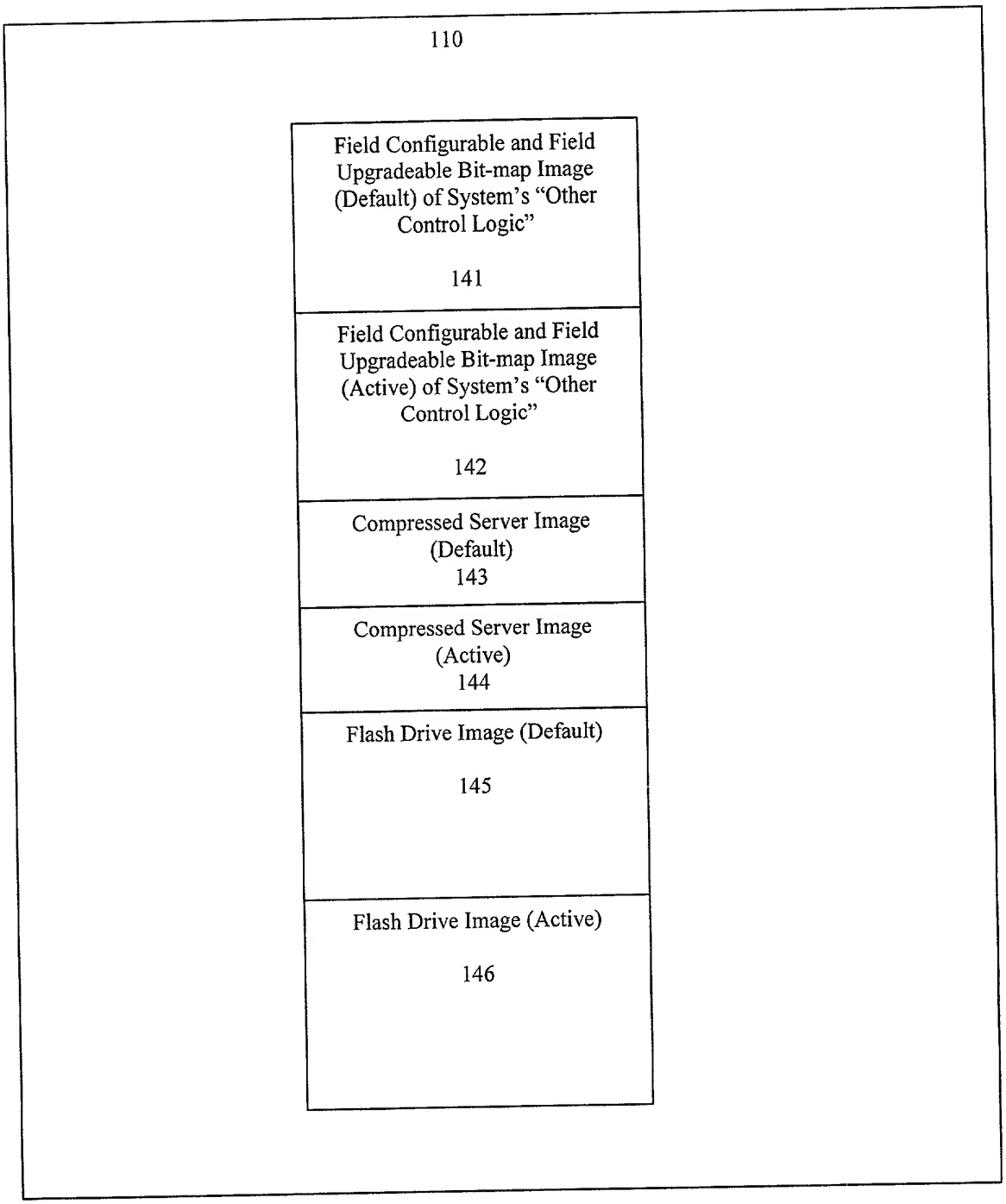
110
Field Configurable and Field Upgradeable Bit-map Image (Default) of System's "Other Control Logic"
141
Field Configurable and Field Upgradeable Bit-map Image (Active) of System's "Other Control Logic"
142
Compressed Server Image (Default)
143
Compressed Server Image (Active)
144
Flash Drive Image (Default)
145
Flash Drive Image (Active)
146

Figure 4

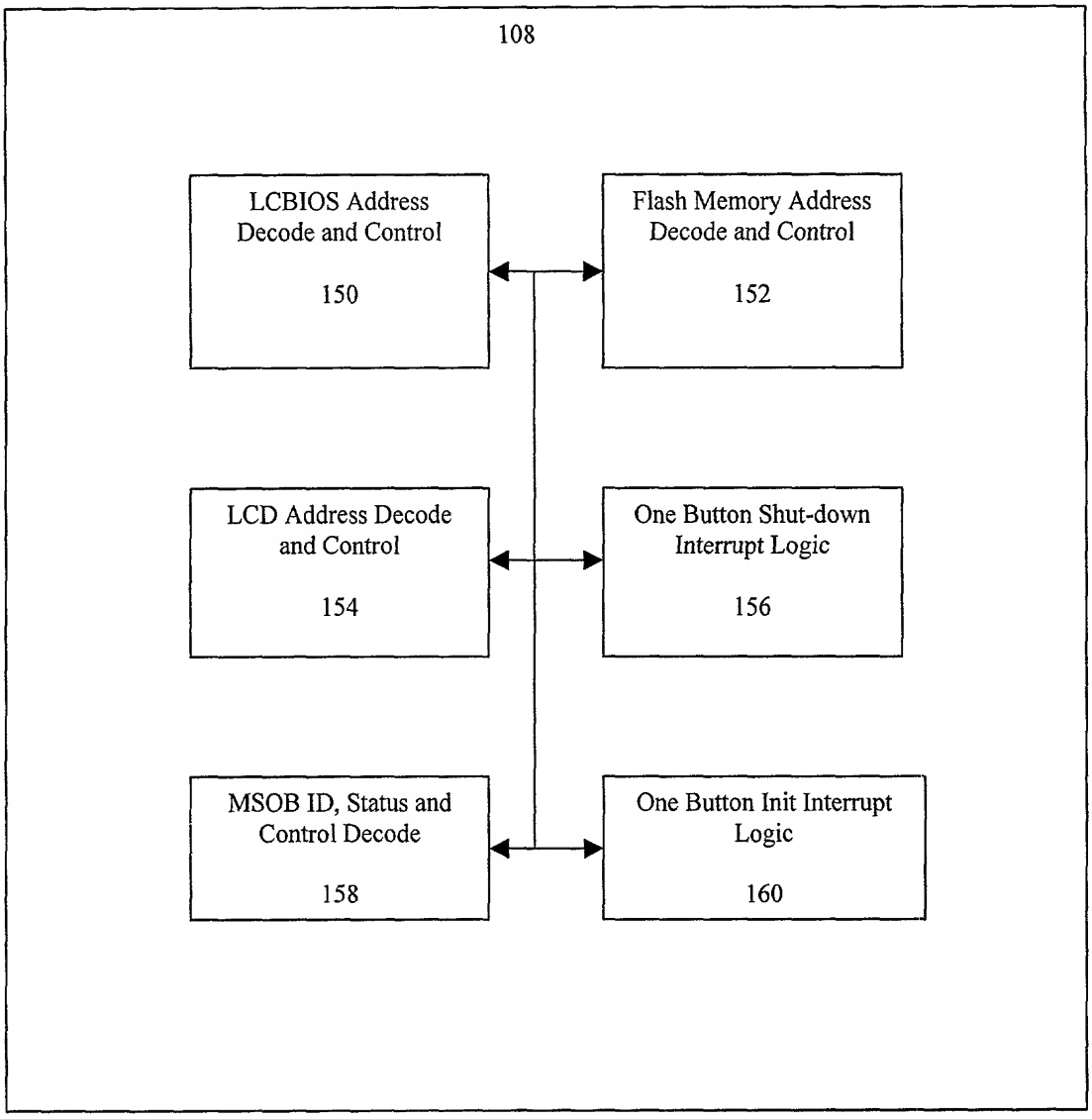
108
LCBIOS Address Decode and Control
150
Flash Memory Address Decode and Control
152
LCD Address Decode and Control
154
One Button Shut-down Interrupt Logic
156
MSOB ID, Status and Control Decode
158
One Button Init Interrupt Logic
160

Figure 5

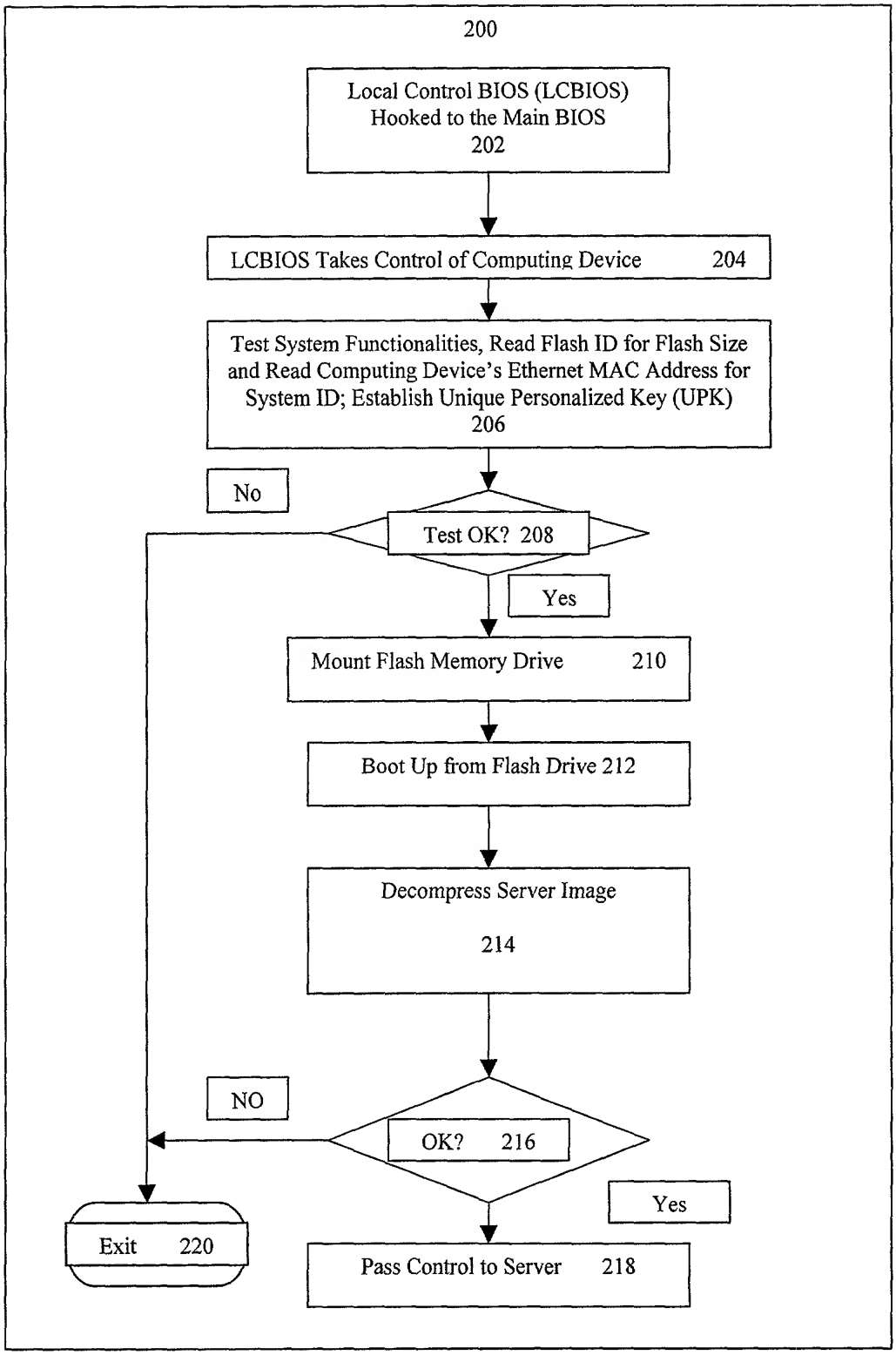
200
Local Control BIOS (LCBIOS) Hooked to the Main BIOS 202
LCBIOS Takes Control of Computing Device 204
Test System Functionalities, Read Flash ID for Flash Size and Read Computing Device's Ethernet MAC Address for System ID; Establish Unique Personalized Key (UPK) 206
No
Test OK? 208
Yes
Mount Flash Memory Drive 210
Boot Up from Flash Drive 212
Decompress Server Image 214
NO
OK? 216
Yes
Exit 220
Pass Control to Server 218

Figure 6

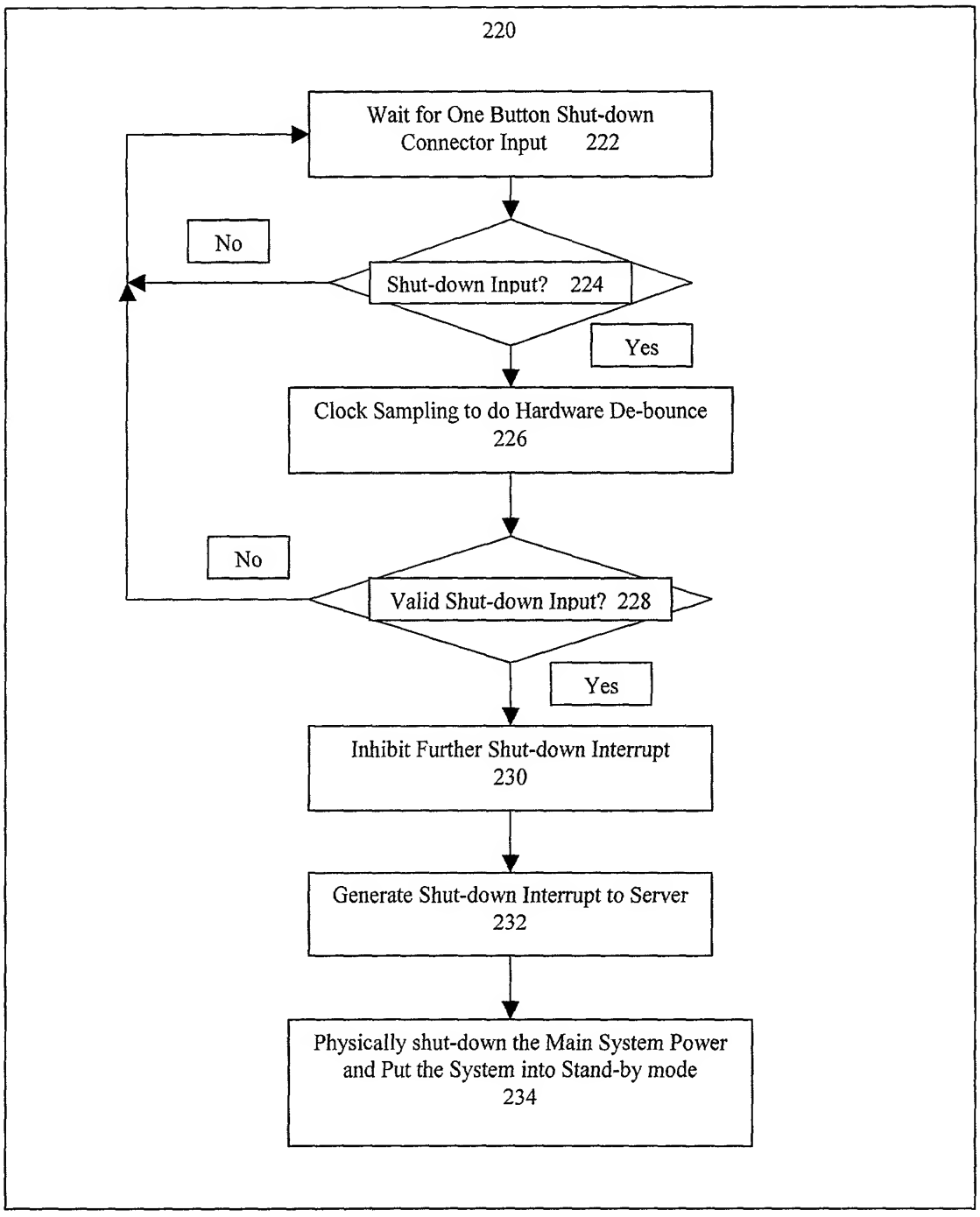
220
Wait for One Button Shut-down Connector Input 222
No
Shut-down Input? 224
Yes
Clock Sampling to do Hardware De-bounce 226
No
Valid Shut-down Input? 228
Yes
Inhibit Further Shut-down Interrupt 230
Generate Shut-down Interrupt to Server 232
Physically shut-down the Main System Power and Put the System into Stand-by mode 234

Figure 7

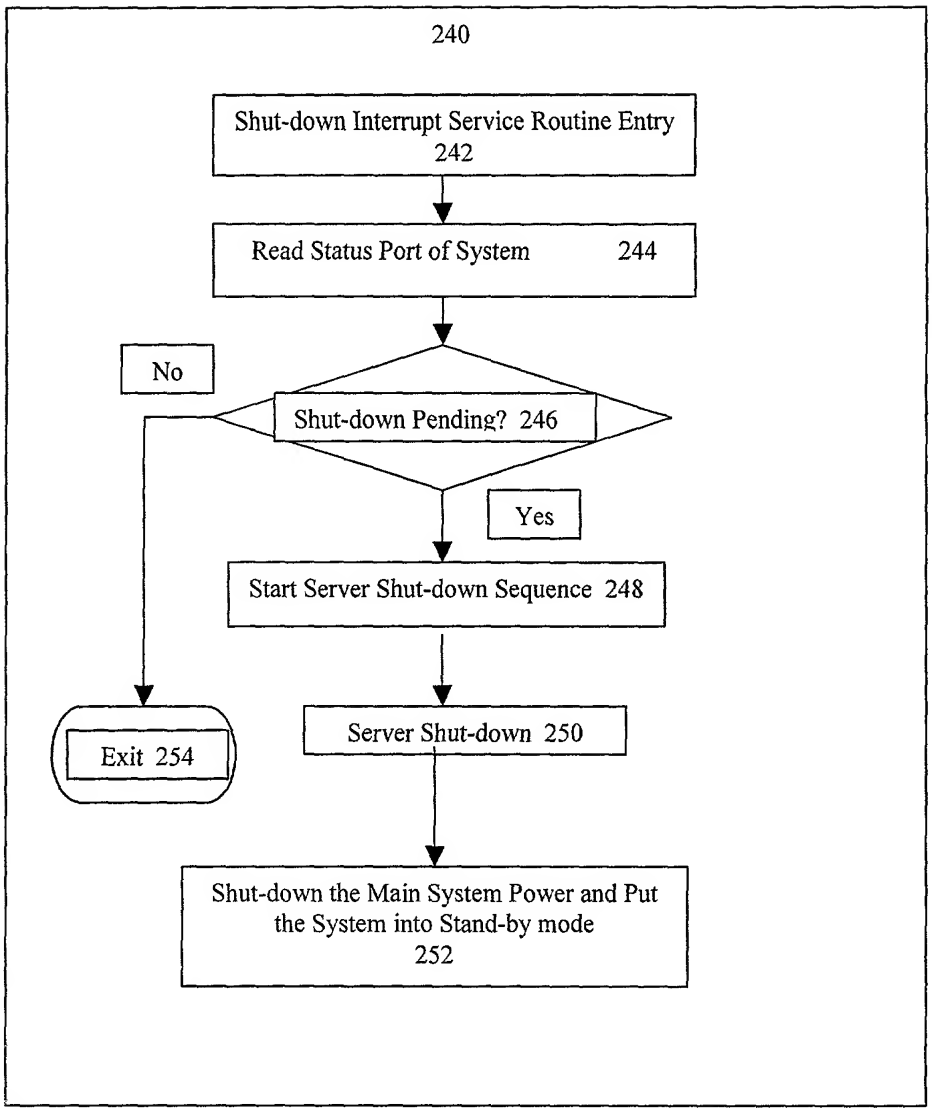
240
Shut-down Interrupt Service Routine Entry
242
Read Status Port of System 244
No
Shut-down Pending? 246
Yes
Start Server Shut-down Sequence 248
Exit 254
Server Shut-down 250
Shut-down the Main System Power and Put the System into Stand-by mode
252

Figure 8

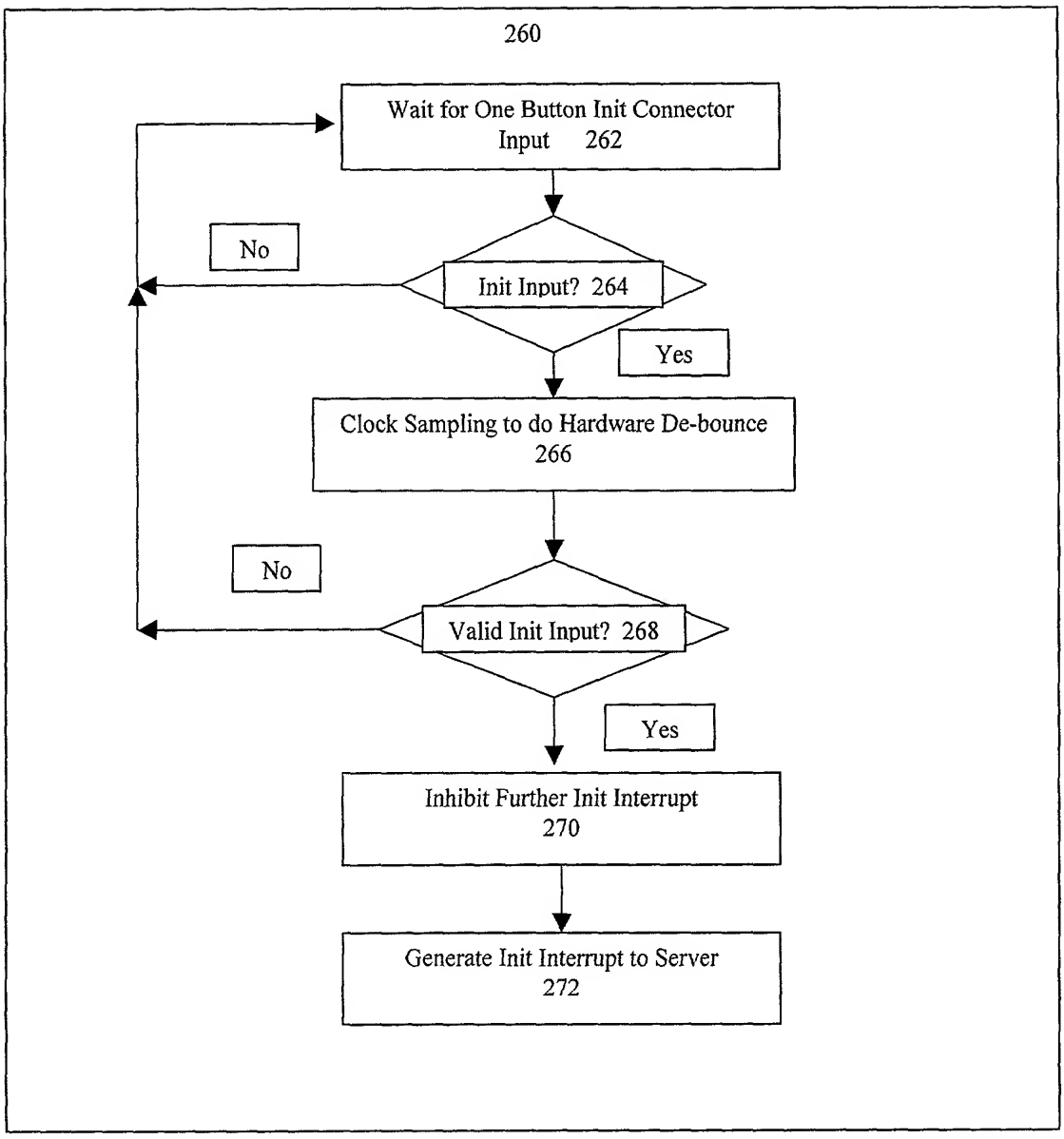
260
Wait for One Button Init Connector Input 262
No
Init Input? 264
Yes
Clock Sampling to do Hardware De-bounce 266
No
Valid Init Input? 268
Yes
Inhibit Further Init Interrupt 270
Generate Init Interrupt to Server 272

Figure 9

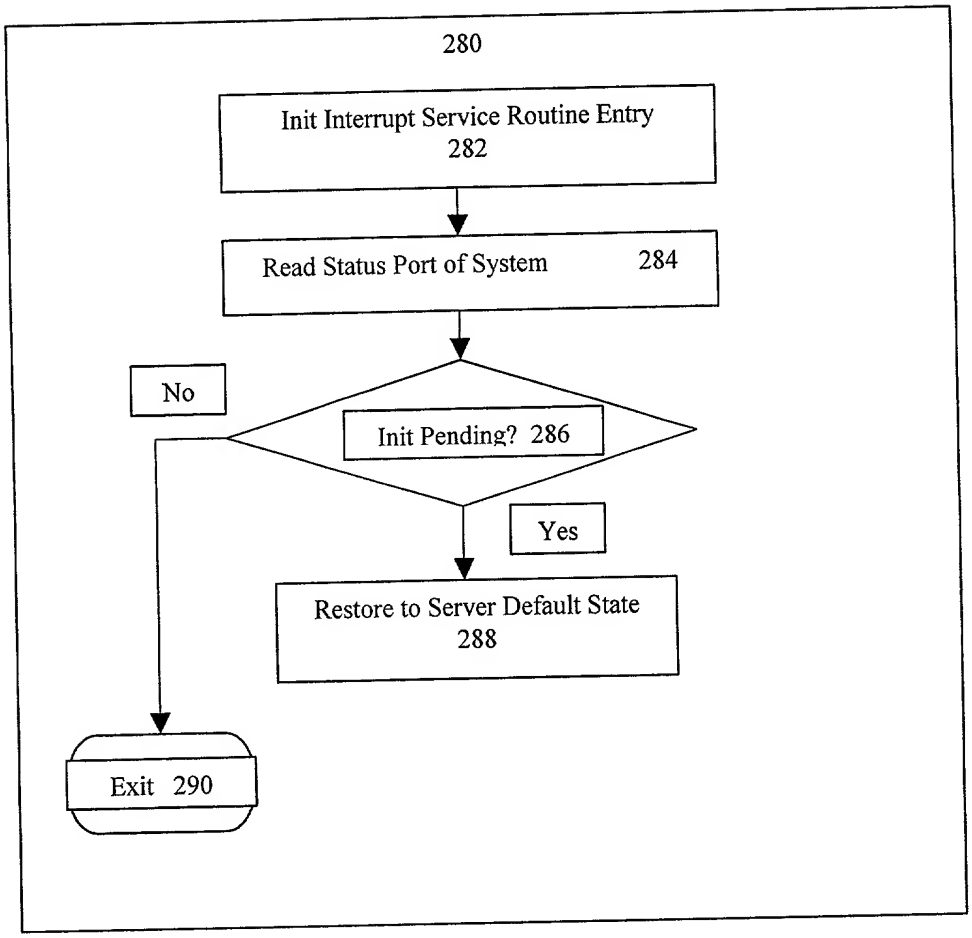
280
Init Interrupt Service Routine Entry
282
Read Status Port of System
284
No
Init Pending? 286
Yes
Restore to Server Default State
288
Exit 290

Figure 10

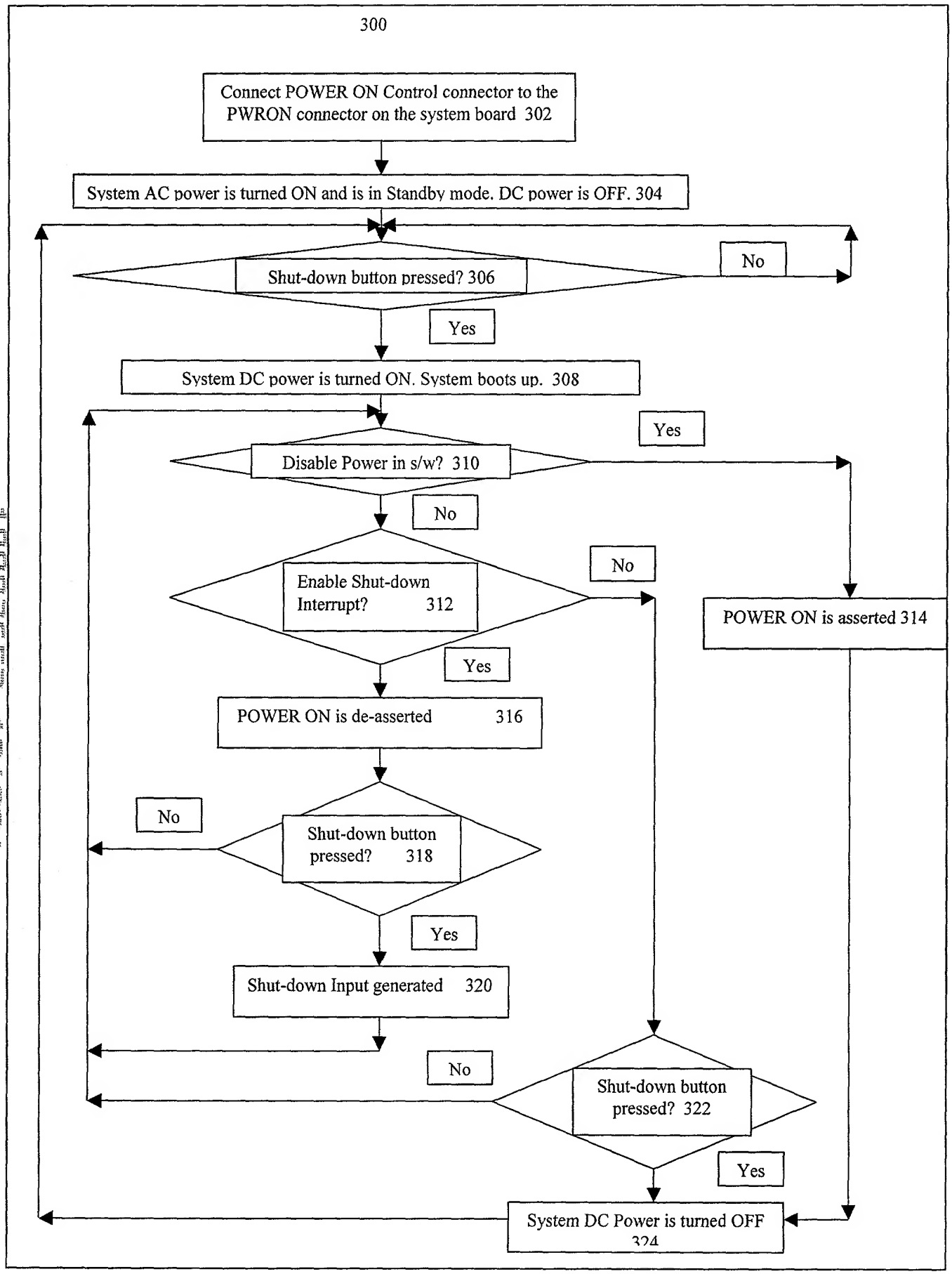
300
Connect POWER ON Control connector to the PWRON connector on the system board 302
System AC power is turned ON and is in Standby mode. DC power is OFF. 304
Shut-down button pressed? 306
No
Yes
System DC power is turned ON. System boots up. 308
Yes
Disable Power in s/w? 310
No
Enable Shut-down Interrupt? 312
No
POWER ON is asserted 314
Yes
POWER ON is de-asserted 316
No
Shut-down button pressed? 318
Yes
Shut-down Input generated 320
No
Shut-down button pressed? 322
Yes
System DC Power is turned OFF 324

Figure 11